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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,356	01/21/2000	HIDEKI KIRINO	HYAE:093	6645

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EXAMINER	
MEHRPOUR, NAGHMEH	
ART UNIT	**PAPER NUMBER**
2686	17

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/423,356	HIDEKI KIRINO	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 14 May 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☒ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *please see the atachment.*.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *please see the attachment*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☒ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1-24*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

CHARLES APPIAH 6/3/04
CHARLES APPIAH
PRIMARY EXAMINER

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed reference listed in the information Disclosure submitted on 11/23/03 have been considered by the examiner (see attached PTO-1449).

Response to Arguments

3. Applicant's arguments filed 5/14/04 have been fully considered but they are not persuasive.

In response to the applicant's argument that, *Okubo `355 uses the term "slave", the alleged correspondence stated in the Office Action, page 3, line 1, that. Okubo `355 slave device 4 corresponds to applicants' slave station is contrary to the discussion in Okubo `355 column 1, line 37 to column. 2, line 51. Therefore, Okubo `355 discloses a transmission apparatus that is different, indeed patentably so, from the presently claimed invention.*

Examiner states that Okubo in Fig. 1 showing slave device 4 is asserted to correspond to applicants' slave station, which is cable-connected directly to master device 3. describing transmission of signals between mobile stations/cellular telephones through slave devices 4 and then conducting such signals to radio frequency stage 31 located in master device 3 of repeater 2 (Fig. 4). Okubo `355, at column 1, lines 50-53, describes slave device 4 directly cabled to master device 3 (see Fig. 1). Column 1, lines 54-67, further describes slave device 4 for communicating

with radio frequency stage 31 within master device 3, i.e., for communication directly to the master station. In the presently claimed invention, regarding Claim 1, Okubo teaches a transmission apparatus comprising: a master station 1 for transmitting and receiving a video or audio transmission signal audio by utilizing a first minute-power wave 5 (See figure 4, col 3 lines 61-67), the transmission signal comprising slave station 4 address information and master station 1(base station) receiving frequency information indicating a frequency at which a master station 1 can receive a signal from a relay station 31 (master device/radio frequency stage) (see figure 4, col 1 lines 30-37); a slave station 4 (mobile/slave) for transmitting and receiving a audio/video transmission signal a second minute power wave 5 (col 4 lines 59-67); and a relay station 31, location between the master station 1 and slave station 4 the master 1 and slave station 4 (see figures 4), the master 1 (base station) and slave stations (4-n) located apart from each other by a distance longer than the reachable range of a first minute-power wave (col 4 lines 43-58); the relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave station 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61); and the slave station 4 is for transmitting information of the relay station 3 receiving frequency at which the relay station 3 receives a signal from the slave station 4, the slave station 4 is recognizing that transmission signal that is a signal directed to the slave station 4, and the slave station 4 is modulating and transmitting a response audio/ video signal information and the relay station 3 frequency, thereby establishing a transmission path between

the master station 1 and the slave station 4 (See figure 4, col 4 lines 59-67). Regarding Claim 13, Okubo teaches a transmission method for mutually transmitting audio transmission between a master station 1 and a slave station 4 by utilizing a minute power wave (transmission signal) (see figures 1, 4), comprising: locating relay station 3 between the master station 1 and the slave station 4 which are located apart from each other by a distance longer than the reachable range of the minute power wave (see figure 1, col 4 lines 42-48); and generating a transmission signal from the master station 1 (base station) comprising, in addition to original audio information, information indicating an address of the slave station 4 (col 4 lines 43-52), and information indicating a frequency at which the master station 1 receives a signal from the relay station 3 (see figure 4, col 4 lines 42-52); modulating by the relay station 3 the frequency of the minute power wave received from the master station 1 to a different frequency 31 (radio frequency stage) and outputting the different frequency (col 1 lines 30-37, col 7 lines 1-21); transmitting by the relay station 3 information about a frequency at which the relay station receives 3 a signal from the slave station 4 (see figure 4 col 4 lines 54-60); and modulating by the modulation the minute power wave (signal) to the frequency specified by the relay station 3 and transmitting the video or audio (col 3 lines 61-67, col 4 lines 1-21); thereby establishing a transmission path between the master station 1 and the slave station 4, when the slave station 4 recognize that the transmission signal is a signal directed to the slave station 4 lines 3-15).

In response to the applicant's argument that Okubo `355 slave device 4 is not for (1) recognizing that a transmission signal is a signal directed to the slave device; and (2) modulating and transmitting a response signal having video or audio information at the relay station

receiving frequency, thereby establishing a transmission path between the radio base station and the slave device 4, as recited in applicants' claims 1 and 13, because no "relay station receiving frequency" is involved.

Examiner states that the relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave station 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61).

In response to the applicant's argument that " Nowhere in Okubo `355 is there any disclosure or suggestion that repeater 2/stage 31 is used for (1) receiving a first signal (fl) from the radio base station (allegedly corresponding to applicants' master station), modulating the first signal to a different frequency (f2), and transmitting the modulated first signal to the slave device 4 (allegedly corresponding to applicants' slave station), and (2) receiving from the radio base station return frequency information (f0) as part of a first signal, demodulating a. portion of a second signal received .

Examiner states that on column 1, line 37 to column. 2, line 51, describing transmission of signals between mobile stations/cellular telephones through slave devices 4 and then conducting such signals to radio frequency stage 31 located in master device 3 of repeater 2 (Fig. 4). Okubo `355, at column 1, lines 50-53, describes slave device 4 directly cabled to master device 3 (see Fig. 1). Column 1, lines 54-67, further describes slave device 4 for communicating

with radio frequency stage 31 within master device 3, i.e., for communication directly to the master station. In the presently claimed invention, the slave station communicates to the relay station, which in turn, communicates with the master station. locating relay station 3 between the master station 1 and the slave station 4 which are located apart from each other by a distance longer than the reachable range of the minute power wave (see figure 1, col 4 lines 42-48); and generating a transmission signal from the master station 1 (base station) comprising, in addition to original audio information, information indicating an address of the slave station 4 (col 4 lines 43-52), and information indicating a frequency at which the master station 1 receives a signal from the relay station 3 (see figure 4, col 4 lines 42-52); modulating by the relay station 3 the frequency of the minute power wave received from the master station 1 to a different frequency 31 (radio frequency stage) and outputting the different frequency (col 1 lines 30-37, col 7 lines 1-21); transmitting by the relay station 3 information about a frequency at which the relay station receives 3 a signal from the slave station 4 (see figure 4 col 4 lines 54-60); and modulating by the modulation the minute power wave (signal) to the frequency specified by the relay station 3 and transmitting the video or audio (col 3 lines 61-67, col 4 lines 1-21); thereby establishing a transmission path between the master station 1 and the slave station 4, when the slave station 4 recognize that the transmission signal is a signal directed to the slave station 4 lines 3-15).

In reply to the applicant's that the Okubo `355 slave device 4 does not correspond to applicants' slave station, but instead operates more as a generic relay station, i.e., passing a transmission originating at a cell phone through itself and on to radio frequency stage 31 in

master device 3 by way of cable connections. In fact, Okubo `355 refers to slave device 4 as part of "repeater 2" for repeating/relaying signals.

Examiner states that Okubo teaches a relay station 31, location between the master station 1 and slave station 4 the master 1 and slave station 4 (see figures 4), the master 1 (base station) and slave stations (4-n) located apart from each other by a distance longer than the reachable range of a first minute-power wave (col 4 lines 43-58). In figure 4, the relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave station 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61) as specifically mentioned on the claims 1, 13.

In response to the applicant's argument that "nowhere in Okubo `355 is there any disclosure or suggestion that repeater 2/stage 31 is used for (1) receiving a first signal (fl) from the radio base station (allegedly corresponding to applicants' master station), modulating the first signal to a different frequency (f2)", and transmitting the modulated first signal to the slave device 4 (allegedly corresponding to applicants' slave station), and (2) receiving from the radio base station return frequency information (f0) as part of a first signal, demodulating a. portion of a second signal received from the slave device 4, modulating the demodulated portion at the radio base station return frequency (f0), and transmitting the modulated portion of the second

signal to the radio base station, thereby establishing a return transmission path between repeater 2/stage 31 and radio base station 1, as recited in applicants' claims 1 see also claim 13.

Examiner states that Okubo `355 radio frequency stage 31 located in master device 3 inside repeater 2 shown in Okubo `355, Fig. 4, corresponds to applicants' relay station, because the stage is located between the radio base 1 and slave device 4, even though stage 31 and :slave devices 4 are cable-connected together, identified as a single module called repeater 2, and actually perform the single function of repeating signals originating from cellular telephones received by slave devices 4 of repeater 2 and relaying those signals to radio base station 1, as shown in Fig. 4. Okubo teaches the relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave station 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61); and the slave station 4 is for transmitting information of the relay station 3 receiving frequency at which the relay station 3 receives a signal from the slave station 4, the slave station 4 is recognizing that transmission signal that is a signal directed to the slave station 4, and the slave station 4 is modulating and transmitting a response audio/ video signal information and the relay station 3 frequency, thereby establishing a transmission path between the master station 1 and the slave station 4 (See figure 4, col 4 lines 59-67).

In response to the Applicant's that Okubo `355 does not disclose or suggest any such "handshaking" exchange between radio base station 1 and any part of repeater 2 for receiving return frequency information in a first signal from base station 1, acting on such information, and using same to transmit a second signal back to radio station 1, as recited in applicants' claims 1 and 13. Moreover, Okubo `355 does not disclose or suggest anything about stage 31, alleged to correspond to applicants' relay station, for transmitting information about a stage 31 receiving frequency at which stage 31 receives a signal from the slave device 4, alleged to correspond to applicants' slave station. There is no description in Okubo `355 saying or implying such "handshaking" structure for transmitting such receiving frequency, as recited in applicants' claims.

Examiner states that Okubo teaches in figure 4, "handshaking" exchange between radio base station 1 and repeater 2 for receiving return frequency information in a first signal from base station 1 as recited in applicants' claims 1 and 13, Okubo teaches a master station 1 for transmitting and receiving a video or audio transmission signal audio by utilizing a first minute-power wave 5 (See figure 4, col 3 lines 61-67), the transmission signal comprising slave station 4 address information and master station 1(base station) receiving frequency information indicating a frequency at which a master station 1 can receive a signal from a relay station 31 (master device/radio frequency stage) (see figure 4, col 1 lines 30-37); a slave station 4 (mobile/slave) for transmitting and receiving a audio/video transmission signal a second minute power wave 5 (col 4 lines 59-67) (col 7 lines 40-61).

In response to the applicant argument's that Okubo `355 does not disclose or suggest that slave device 4, alleged to correspond to applicants slave station, has structure for learning about the stage 31 receiving frequency and then transmitting a response signal at the stage 31 receiving frequency. Nowhere does Okubo `355 disclose or suggest that slave devices 4 receive such receiving frequency and then act on such information by transmitting back to stage 31 at that frequency. In all of these instances, Okubo `355 says nothing about such exchange of frequency information. This lack of disclosure, of course, makes sense because stage 31 and slave devices 4 are wired together as part of one module called repeater 2, and can function without a preliminary exchange of transmission protocols. Okubo `355 does not disclose or suggest that any of such devices intercommunicates specifically as recited in applicants' claims 1 and 13.

Examiner states that Okubo teaches modulating by the relay station 3 the frequency of the minute power wave received from the master station 1 to a different frequency 31 (radio frequency stage) and outputting the different frequency (col 1 lines 30-37, col 70 lines 1-21); transmitting by the relay station 3 information about a frequency at which the relay station receives 3 a signal from the slave station 4 (see figure 4 col 4 lines 54-60); and modulating by the modulation the minute power wave (signal) to the frequency specified by the relay station 3 and transmitting the video or audio (col 3 lines 61-67, col 4 lines 1-21); thereby establishing a transmission path between the master station 1 and the slave station 4, when the slave station 4 recognize that the transmission signal is a signal directed to the slave station 4 lines 3-15). a master station 1 for transmitting and receiving a video or audio transmission signal audio by utilizing a first minute-power wave 5 (See figure 4, col 3 lines 61-67), the transmission signal comprising slave station 4 address information and master station 1(base station) receiving

frequency information indicating a frequency at which a master station 1 can receive a signal from a relay station 31 (master device/radio frequency stage) (see figure 4, col 1 lines 30-37); a slave station 4 (mobile/slave) for transmitting and receiving a audio/video transmission signal a second minute power wave 5 (col 4 lines 59-67); and a relay station 31, location between the master station 1 and slave station 4 the master 1 and slave station 4 (see figures 4), the master 1 (base station) and slave stations (4-n) located apart from each other by a distance longer than the reachable range of a first minute-power wave (col 4 lines 43-58); the relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave station 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61); and the slave station 4 is for transmitting information of the relay station 3 receiving frequency at which the relay station 3 receives a signal from the slave station 4, the slave station 4 is recognizing that transmission signal that is a signal directed to the slave station 4, and the slave station 4 is modulating and transmitting a response audio/ video signal information and the relay station 3 frequency, thereby establishing a transmission path between the master station 1 and the slave station 4 (See figure 4, col 4 lines 59-67). Okubo teaches a transmission method for mutually transmitting audio transmission between a master station 1 and a slave station 4 by utilizing a minute power wave (transmission signal) (see figures 1, 4), comprising: locating relay station 3 between the master station 1 and the slave station 4 which are located apart from each other by a distance longer than the reachable range of the minute power wave (see figure 1, col 4 lines 42-

48); and generating a transmission signal from the master station 1 (base station) comprising, in addition to original audio information, information indicating an address of the slave station 4 (col 4 lines 43-52), and information indicating a frequency at which the master station 1 receives a signal from the relay station 3 (see figure 4, col 4 lines 42-52); modulating by the relay station 3 the frequency of the minute power wave received from the master station 1 to a different frequency 31 (radio frequency stage) and outputting the different frequency (col 1 lines 30-37, col 7 lines 1-21); transmitting by the relay station 3 information about a frequency at which the relay station receives 3 a signal from the slave station 4 (see figure 4 col 4 lines 54-60); and modulating by the modulation the minute power wave (signal) to the frequency specified by the relay station 3 and transmitting the video or audio (col 3 lines 61-67, col 4 lines 1-21); thereby establishing a transmission path between the master station 1 and the slave station 4, when the slave station 4 recognize that the transmission signal is a signal directed to the slave station 4 lines 3-15).

In response to the applicant's that the transmission apparatus and method for using same includes a transmitter having an RF converter that generates a standard television transmission signal in a transmission mode; a receiver having an RF tuner for receiving the standard television transmission signal in a reception mode; frequency detection means for detecting available frequencies for video transmission, within the reception band of the RF tuner, in advance of use; detected frequency registration means for registering the detected frequencies, as a communication frequency list, in both of the transmitter and the receiver; and spread spectrum communication means for spreading the power spectrum by changing the frequency within the

range of the communication frequency list, and performing spread spectrum communication. This arrangement and corresponding method are nowhere disclosed or suggested in the cited reference. The spread spectrum function mentioned in Hylton `413 is not recited in applicants' claims 5, 8, 9, 15-17, 20 and 21. Hylton `413, at column 29, lines 14-21, is said to disclose applicants' transmission apparatus including frequency detection means for detecting available frequencies for video transmission, within the reception band of the RF tuner, in advance of use, as recited in applicants' claims 3 and 15. However, Hylton `413 discloses merely that a tuner implements the spread spectrum communication using CDMA, which is not the same as applicants' frequency detection means for detecting available frequencies for video transmission, within the reception band of the RF tuner, in advance of use. In fact, Hylton `413, column 29, line 14-16, states that "the output of the tuner 512 is fed to a frequency hopping Code Division Multiple Access (CDMA) spread spectrum transmitter 516." Thus, Hylton `413 discloses mere frequency hopping and not detection of available frequencies, and moreover, discloses such activity after generation of output to be transmitted (i.e., feeding output of tuner 512 into the CDMA transmitter 516), and not in advance of use, i.e., before such feeding of output.

Examiner states that regarding claims 3, 15, Hylton teaches a transmission apparatus comprising: a transmitter having an RF converter (DAC) which generates a standard television signal (see figure 8, col 27 lines 18-30); a receiver having an RF tuner 512 which receives the standard television signal (see figure 8, col 29 lines 1-7); available frequency detection means for detecting frequencies which can be used for video transmission (col 29 line 14-21, frequency synthesizer detecting the frequency), within the reception band of the RF tuner, in advance of use (col 29 lines 5-16, predetermined broad frequency band is the band that is in the RF tuner, col 29

lines 55-56); detected frequency registration means for registering the detected frequencies (frequency synthesizer detects frequency, col 35 lines 8-14, col 36 lines 49-52), as a communication frequency list (lists of channels in the channel map, col 35 lines 5-7), in both of the transmitter 1219 and the receiver 1216 (see figure 10, col 37 lines 65-67); and spread spectrum communication means for spreading the power spectrum by changing the frequency within the range of the communication frequency list (col 35 lines 4-14), and performing spread spectrum communication (col 35 lines 45-55, col 38 lines 25-40).

Regarding claims 8, 20, Hylton teaches a transmission apparatus comprising: first and second transmission/reception apparatuses each comprising a transmission apparatus wherein frequency changing order control means for controlling the frequency changing order, during the communication (col 29 lines 45-67, col 30 lines 1-4), in such a manner that the frequency is changed in one direction, from the higher frequency to the lower frequency or from the lower frequency to the higher frequency, within the range of the communication frequency list, and when the frequency reaches the end of the frequency list, it is returned to the beginning of the frequency list (*a common type of carrier wave modulation used in SFH-CDMA systems is M-ary frequency shift keying (MFSK), where k=log.sub.2 M data symbols are used to determine which one of the M frequencies is to be transmitted (col 29 lines 65-67, col 30 lines 1-3)*; and communication control means for controlling the first and second transmission/reception apparatuses to realize duplex communication (see figure 8, col 29 lines 18-52), by using a frequency time table in which the first and second transmission/reception apparatuses always use different frequencies (col 29 lines 53-64). Regarding claims, 20-21, Hylton inherently teaches a transmission apparatus further comprising communication frequency

list update means which uses the previously registered communication frequency list when stating the communication, and uses a second communication frequency list obtained by duplicating the registered communication frequency list after the communication has been started, and updates the second communication frequency list as desired by exchanging the result of communication, i.e, whether it is good or bad, between the first and second transmission/reception apparatuses (col 29 lines 43-67, col 30 lines 1-5). Hylton teaches method of spread communications by assignment of portions of broad frequency band (frequency list) to each particular channel. Communication between two communication units in a particular communication channel is accomplished by using a frequency synthesizer to generate a carrier wave in a particular portion of a predetermined broad frequency band for a brief period of time. The frequency synthesizer uses an input spreading code to determine the particular frequency from within the set of frequencies in the broad frequency band at which to generate the carrier wave. Spreading codes are input to the frequency synthesizer by a spreading code generator. The spreading code generator is periodically clocked or stepped through different transitions which causes different or shifted spreading codes to be output to the frequency synthesizer. Therefore, as the spreading code generator is periodically clocked, the carrier wave is frequency hopped or reassigned to different portions of the frequency band. In addition to hopping, the carrier wave is modulated by data symbols representing a sequence of data bits to be transmitted. A common type of carrier wave modulation used in SFH-CDMA systems is M-ary frequency shift keying (MFSK), where k=log.sub.2 M data symbols are used to determine which one of the M frequencies is to be transmitted. Multiple communication channels are allocated by using a plurality of spreading codes. As a result, transmitted signals are in the same broad frequency

band of the communication channel, but within unique portions of the broad frequency band assigned by the unique spreading codes (col 29 lines 43-67, col 30 lines 1-5). In order to achieves method of CDMA communication systems, the system has to go through the frequency list (broad frequency band) by the M (klog2) frequency interval, and each time it examine a frequency update the frequency list till it determine the transmit frequency.

In response to the applicant's claims 4, 5, 8 and 9, which depend from claim 3, and claims 16, 17, 20 and 21, which depend from claim 15, are allowable for the same reasons given for the allowance of claims 3 and 15. Hylton `413, at column 30, lines 4-29, is said to disclose applicants' means for automatically changing transmission power during communication in accordance with the use frequency band width for keeping the power density per unit band width constant. However, the spread spectrum function described by Hylton `413 varies a carrier frequency iteratively according to a predetermined sequence, or modulates a carrier frequency using pseudo noise, and is not the same as applicants' function for automatically changing the transmission power during the communication in accordance with the use frequency band width to keep the power density per unit bandwidth constant, as recited in applicants' claim 4. For the foregoing reasons, Hylton `413 fails to disclose all elements of applicants' claimed invention, and therefore is not a proper basis for rejection under. §102. And, there is no disclosure or teaching in Efylton `413 that would have suggested the desirability of modifying any portions thereof effectively to suggest applicants' presently claimed invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested. Regarding Claims 4, Hylton teaches a transmission power control means for automatically changing the transmission power during the

communication in accordance with the use frequency band width so as to keep the power density per unit bandwidth constant (col 30 lines 4-29). A transmitter having a power spectrum shaped, it provides the maximum power over the bandwidth of interest while maintaining the required power density. Regarding **Claim 5,** Hylton teaches a transmission apparatus further comprising frequency changing mean; for changing the frequency during the communication, in synchronization with the synchronous timing of the video signal (col 29 lines 14-29, lines 45-64). Regarding **Claim 9,** Hylton inherently teaches a transmission apparatus further comprising communication frequency list update means which uses the previously registered communication frequency list when stating the communication, and uses a second communication frequency list obtained by duplicating the registered communication frequency list after the communication has been started, and updates the second communication frequency list as desired by exchanging the result of communication, i.e, whether it is good or bad, between the first and second transmission/reception apparatuses (col 29 lines 43-67, col 30 lines 1-5). Hylton teaches method of spread communications by assignment of portions of broad frequency band (frequency list) to each particular channel. Communication between two communication units in a particular communication channel is accomplished by using a frequency synthesizer to generate a carrier wave in a particular portion of a predetermined broad frequency band for a brief period of time. The frequency synthesizer uses an input spreading code to determine the particular frequency from within the set of frequencies in the broad frequency band at which to generate the carrier wave. Spreading codes are input to the frequency synthesizer by a spreading code generator. The spreading code generator is periodically clocked or stepped through different transitions which causes different or shifted spreading codes to be output to the frequency synthesizer.

Therefore, as the spreading code generator is periodically clocked, the carrier wave is frequency hopped or reassigned to different portions of the frequency band. In addition to hopping, the carrier wave is modulated by data symbols representing a sequence of data bits to be transmitted. A common type of carrier wave modulation used in SFH-CDMA systems is M-ary frequency shift keying (MFSK), where k=log.sub.2 M data symbols are used to determine which one of the M frequencies is to be transmitted. Multiple communication channels are allocated by using a plurality of spreading codes. As a result, transmitted signals are in the same broad frequency band of the communication channel, but within unique portions of the broad frequency band assigned by the unique spreading codes (col 29 lines 43-67, col 30 lines 1-5). In order to achieves method of CDMA communication systems, the system has to go through the frequency list (broad frequency band) by the M (klog2) frequency interval, and each time it examine a frequency update the frequency list till it determine the transmit frequency.

In response to the applicant's argument that the video signal, as recited in claims 2 and 14. This arrangement and corresponding method are nowhere disclosed or suggested in the cited reference. Claim 2, which depends from claim 1, and claim 14, which depends from claim 15, are allowable for the same reasons already given for the allowance of claims 1 and 15. Moreover, the Examines: admits that Okubo `355 does not disclose applicants' transmission apparatus and method comprising transmitting a control signal by superposing it on the video signal in the blanking period during communication; Hattori `619 is said to teach same. However, while Hattori `619, column 28, lines 40-99 teaches a method of transmitting a "program related information" control signal by superposing it on the video signal in the vertical blanking period, Hattori `619, column 28, lines 50-59, describes such "program related information" control

signal as various kinds of signals including question data, evaluation data, selection data or PCM audio data, any of which is superposed on the video signal in the vertical blanking period. But, Hattori `619 does not disclose or suggest a method of superposing a signal indicating the frequency of a transmission signal on the transmission signal. This signal information is completely different than any type of signal to be superposed discussed in Hattori `619. Moreover, while Okuh-o `355 discloses a method of automatically performing compensation for attenuation of signals that are transmitted through optical cables interconnecting a master device and a plurality of slave devices all located in a repeater for a radio paging system, Okubo `355 does not disclose or suggest a method of superposing a signal indicating the frequency of the transmission signal on the transmission signal. For the foregoing reasons, neither Okubo `355 nor Hattori `619 contains any teaching, suggestion, reason, motivation or incentive that would have led one of ordinary skill in the art to applicants' claimed invention. Nor is there any disclosure or teaching in either of these references that would have suggested the desirability of combining any portions thereof effectively to suggest applicants' presently claimed invention.

The Examiner states that regarding claims 2, 14, Okubo fails teach a transmission apparatus as described further comprising control signal superposition and transmission means for transmitting a control signal by superposing it on the video signal in the blanking period, during the communication. However, Hattori teaches a method of transmitting a control signal by superposing it on the video signal in the blanking period, during the communication (col 28 lines 40-47).Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Hattori system that superposing audio signals to a vertical

blanking period of the video signal with Okubo wireless video system, in order to reduce the interference in a RF communication system with plurality of wireless video terminals.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claims 6-7, 19, Hylton fails to teach a transmission apparatus comprising audio signal superposition and transmission means for subjecting an audio signal to PCM, and for transmitting the PCM audio signal by superposing the PCM audio signal on the video in the blanking period, during the communication. Hattori teaches a transmission apparatus comprising audio signal superposition and transmission means for subjecting an audio signal to PCM, and for transmitting the PCM audio signal by superposing the PCM audio signal on the video in the blanking period, during the communication (col 28 lines 50-60).Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine Hattori system that superposing audio signals to a vertical blanking period of the video signal with Hylton wireless video system, in order to broadcast information data of question data, selection data, evaluation data can be broadcast in a multiplexed condition by the FM teletext broadcast.

In response to the applicant's argument that Hylton `413 does not disclose the above-described transmission apparatus of claims 10 and 22, and cites Yoshinobu `526 as allegedly teaching same. Actually, Yoshinobu `526 teaches a system and method in which a two-way broadcast program, such as a TV shopping or quiz program, requires a response information transmitting apparatus for transmitting a response information including ID information and apparatus ID. However, contrary to the position advanced by the Examiner the transmission apparatus in Yoshinobu `526 does not implement the ID inquiry and ID registration with another transmission apparatus that, is permitted to have communication in advance of use. Furthermore, the system and method of Yoshinobu `526 is not a transmission apparatus, but instead is a television receiver, which cannot transmit signals.

. The Examiner assets that regarding claims 10, 22, Hylton fails to teach transmission apparatus comprising : ID storage means for storing an identification number which is given to the transmission apparatus during manufacture; and ID inquiry and registration means for performing mutual inquiry of IDs with another transmission apparatus which is permitted to have communication in advance of use, and registering the ID. However Yoshinobu teaches a television receive of which screen and speaker provide interface between a system for two way broadcast program and a user, and a remote control transmitter for selecting a response (col 5 lines 55-60), the response information includes a header for indicating a response command; identification (ID) information such as program ID information and an apparatus ID (an ID number of the response information transmitting apparatus, which may be a serial number of given at the manufacture of the apparatus (col 7 lines 5-12). The ID number assigned at manufacture) that the transmitting apparatus has as fixed data stored in the ROM (col 8 lines 12-

23). Hylton and Yoshinobu's systems both operates in the same kind of environment. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine Yoshinobu's teaching with Hylton, in order to prevent any other transmitter controller receives the signal from the broadcaster for the purpose of security.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hylton fails to teach transmission apparatus comprising : ID storage means for storing an identification number which is given to the transmission apparatus during manufacture; and ID inquiry and registration means for performing mutual inquiry of IDs with another transmission apparatus which is permitted to have communication in advance of use, and registering the ID. However Yoshinobu teaches a television receive of which screen and speaker provide interface between a system for two way broadcast program and a user, and a remote control transmitter for selecting a response (col 5 lines 55-60), the response information includes a header for indicating a response command; identification (ID) information such as program ID information and an apparatus ID (an ID number of the response information transmitting apparatus, which may be a serial number of given at the manufacture of the apparatus (col 7 lines 5-12). The ID number assigned at manufacture) that the transmitting

apparatus has as fixed data stored in the ROM (col 8 lines 12-23). Hylton and Yoshinobu's systems both operates in the same kind of environment. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine Yoshinobu's teaching with Hylton, in order to prevent any other transmitter controller receives the signal from the broadcaster for the purpose of security.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the combination of Hylton and Yoshinobu fails to teach that retransmission means for performing retransmission by using a frequency time table different from said frequency time table when a transmission signal from another apparatus which has requested communication cannot be detected even when a predetermined period of time has passed after starting the transmission mode, and communication signal from another terminal cannot be detected when a predetermined period has passed. However Matsuda teaches a retransmission means for performing retransmission by using a frequency time table different from said frequency time table when a transmission signal from another apparatus which has requested communication cannot be detected even when a predetermined period of time has passed after starting the transmission mode, and communication signal from another terminal cannot be detected when a

predetermined period has passed. (col 7 lines 34-62). Matsuda mentioned that due to movement of the wireless video terminal from the zone 18 A the zone 18B, the wireless terminal can not receive a signal which is transmitted by the base station for Video data that controlling the zone 18A (col 10 lines 29-67). Since Hylton modified by Yoshinobu teaches a transmission apparatus wherein frequency setting means which always executes the reception mode in advance of the transmission mode to detect the frequency time tables of all other transmission apparatus which are performing transmission within the game wave area (Hylton, col 34 lines 33-39), and performs transmission by using a frequency time table the use frequency of which is always different from those of these other transmission apparatus (Hylton, col 33 lines 55-67, col 34 lines 1-2), and Matsuda teaches that requested communication from other terminals cannot be detected if the predetermined time is passed. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Matsuda with Hylton modified by Yoshinobu, in order to provide a wireless video system which performs with no interference.

Conclusion

4. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications indented for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II. 2121 Crystal Drive, Arlington. Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha Banks-Harold be reached (703)305-4379.

NM

June 1, 2004